

What is claimed is:

1. A thin film bulk acoustic resonator controlling resonance frequency comprising:

5 a fixed body having a first electrode;

a driving body installed to be adjacent to the fixed body, having a second electrode, and moving toward the fixed body by a voltage applied to the first and second electrodes; and

10 a thin film bulk acoustic resonator for generating a resonance frequency and controlling the generated resonance frequency according to change of stress generated by the movement of the driving body.

2. The resonator of claim 1, wherein the thin film bulk acoustic resonator is located on upper part of the driving body.

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3. The resonator of claim 1, wherein the driving body is moved toward the fixed body by an electrostatic force generated by the voltage applied to the first and second electrodes.

20 4. The resonator of claim 1, wherein surfaces of the fixed body and the driving body facing each other are respectively formed to be a plurality of protruded portions and a plurality of recessed portions, and the protruded portion and the recessed portion of the fixed body and the recessed portion and the protruded portion of the driving body are engaged with each other.

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5. The resonator of claim 1, wherein the protruded portion and the recessed portion of the fixed body and the recessed portion and the protruded portion of the driving body are engaged with each other by the electrostatic force generated by the voltages applied to the first and second electrodes.

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6. The resonator of claim 1, wherein the surfaces of the fixed body and the driving body facing each other are formed to have a plurality of irregular structures, and the irregular structures are engaged with each other.

10 7. The resonator of claim 1, wherein the driving body is returned to original status by an elasticity structure.

8. The resonator of claim 1 further comprising an amplifier for amplifying the resonance frequency controlled by the thin film bulk acoustic resonator and for outputting the amplified frequency.

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9. A voltage controlled oscillator comprising:

a thin film bulk acoustic resonator for generating a resonance frequency and controlling the generated resonance frequency according to applied voltage;

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an amplifier for amplifying the resonance frequency controlled by the thin film bulk acoustic resonator to be a certain frequency, and outputting the amplified frequency.

25 10. The oscillator of claim 9, wherein the thin film bulk acoustic

resonator increases or decreases the resonance frequency according to the voltage.